

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently Amended) A ~~[[S]]~~signal processing method in a dental radiology apparatus comprising ~~an intraoral sensor that delivers at least one analog image output signal in response to an exposure of said sensor to x-rays,~~ comprising the following steps:

- converting ~~said~~ at least one analog image output signal into one digital image output signal[[,]]; ~~and~~
- processing the digital image output signal, wherein the processing comprises, forming a curve giving the number of pixels of the digital image output signal per gray level, and determining the extreme amplitude values (max, min) of the curve's digital gray levels to obtain a report indicating the an x-ray exposure level that has been used to deliver said analog image output signal, and wherein the report indicating the exposure level correspond[[ing]]s to an exposure level classified as under-exposure, correct exposure or over-exposure[[,]]; and
- supplying the report indicating the exposure level used.

2. (Currently Amended) The [[M]]method according to claim 1, ~~characterized in that- wherein~~ the processing of the digital image output signal is based on ~~the~~ extreme amplitude values of ~~said~~ the digital image output signal that have been previously determined.

3. (Currently Amended) The [[M]]method according to claim 2, ~~characterized in that- wherein~~ the processing further comprises ~~the following steps:~~

- comparing one extreme amplitude value or a combination of extreme amplitude values with one or more threshold values[[,]]; ~~and~~
- supplying the report indicating the exposure level used.

4. (Canceled)

5. (Canceled)

6. (Currently Amended) The ~~[[M]]~~method according to claim ~~[[5]]~~1, ~~characterized in that~~ wherein the processing further includes ~~a step of~~ determining a difference $\Delta = \text{max-min}$.

7. (Currently Amended) The ~~[[M]]~~method according to claim 6, ~~characterized in that~~ wherein the processing further includes ~~a first step of~~ ~~comparison of~~ comparing the difference Δ with a first value threshold1.

8. (Currently Amended) The ~~[[M]]~~method according to claim 7, ~~characterized in that~~ wherein the processing further includes ~~a decision step as to~~ ~~the supply of the report indicating the exposure level used or the performance of~~ performing a second comparison step according to the result of the first comparison step.

9. (Currently Amended) The ~~[[M]]~~method according to claim 7, ~~characterized in that~~ wherein the report indicating the exposure level used corresponds to an under-exposure level when the difference Δ is less than or equal to the first value threshold1.

10. (Currently Amended) The ~~[[M]]~~method according to claim 7, ~~characterized in that~~ wherein when the difference Δ is greater than the first value threshold1, then the processing further includes ~~a second step of comparison of~~ comparing the maximum amplitude value with a second value threshold2.

11. (Currently Amended) The ~~[[M]]~~method according to claim 10, ~~characterized in that~~ wherein the processing further includes ~~a decision step as to~~ ~~the supply of the report indicating the exposure level used or as to the~~

~~performance of performing~~ an additional test[[,]] according to the result of the second comparison step.

12. (Currently Amended) The [[M]]method according to claim 10, ~~characterized in that~~ wherein the report indicating the exposure level used corresponds to a correct exposure level when the maximum amplitude value is less than the second value threshold2.

13. (Currently Amended) The [[M]]method according to claim 10, ~~characterized in that~~ wherein when the maximum value is greater than or equal to the second value threshold2, ~~then~~ the processing further includes ~~an additional test step in order to determine~~ determining the presence or absence of data indicating an overflow in the digital output signal.

14. (Currently Amended) The [[M]]method according to claim 13, ~~characterized in that~~ wherein according to the ~~determination of~~ determining the presence or absence of data indicating an overflow, the processing further includes ~~a decision step as to the supply of deciding if~~ the report indicating the exposure level used ~~corresponding~~ corresponds respectively to an over-exposure level or a correct exposure level.

15. (Currently Amended) The [[M]]method according to claim 1, ~~characterized in that it~~ wherein the supplying further includes ~~a step of display of displaying~~ the report indicating the exposure level used on a display screen.

16. (Currently Amended) The [[M]]method according to claim 15, ~~characterized in that it includes a step of display of~~ wherein the displaying further includes displaying the corresponding image signal on the display screen.

17. (Currently Amended) The [[M]]method according to claim 15, ~~characterized in that~~ wherein the report indicating the exposure level is displayed

in the form of at least one indicator whose position varies according to the report obtained by the signal processing.

18. (Currently Amended) The [[M]]method according to claim 17,
~~characterized in that~~ wherein the position of the indicator varies according to the difference Δ obtained.

19. (Currently Amended) The [[M]]method according to claim 15,
~~characterized in that~~ wherein the report indicating the level of under-exposure, correct exposure or over-exposure is displayed in the form of a cursor producing a visual effect that varies at least for certain exposure levels.

20. (Currently Amended) The [[M]]method according to claim 19,
~~characterized in that~~ wherein the visual effect is color.

21. (Currently Amended) The [[M]]method according to claim 1,
~~characterized in that~~ wherein the conversion step converting is performed in an analog-digital converter having an input window adjusted to ~~the~~ a dynamic range of the analog signal delivered by ~~the~~ an intraoral sensor.

22. (Currently Amended) [[D]] A dental radiology apparatus comprising:
- an adjustable intraoral sensor that is adjusted configured to deliver at least one analog image output signal in response to an exposure of said adjustable intraoral sensor to x-rays ~~comprising:~~
- a conversion unit configured to convert ~~of said~~ at least one analog image output signal into one digital image output signal~~[[,]]~~;
- a processing unit configured to form a curve giving the number of pixels of the digital image output signal per gray level, to determine extreme amplitude values (max, min) of the curve's digital gray levels, and of the digital image output signal that is adjusted to obtain a report indicating the x-ray exposure level that has been used to deliver said analog output signal, wherein the

report indicating the exposure level correspond~~[[ing]]~~s to an exposure level classified as under-exposure, correct exposure or over-exposure~~[[,]]~~; and

- means ~~of supply of~~ for supplying the report indicating the exposure level used.

23. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 22, ~~characterized in that the processing of the digital image output signal being performed based on extreme amplitude values of said signal that were previously determined,~~ wherein the processing unit comprises means ~~of comparison for~~ comparing that are adjusted to compare one extreme amplitude value or a combination of extreme amplitude values with one or more threshold values.

24. (Canceled)

25. (Canceled)

26. (Currently Amended) ~~[[A]]~~ The apparatus according to claim ~~[[25]]~~22, ~~characterized in that~~ wherein the central processing unit comprises ~~the~~ means ~~of~~ for determining a difference $\Delta = \text{max-min}$.

27. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 26, ~~characterized in that~~ wherein the central processing unit comprises ~~the first~~ means ~~of comparison of~~ for comparing the difference Δ with a first value threshold~~1~~.

28. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 27, ~~characterized in that~~ wherein the central processing unit further includes ~~a~~ means ~~of decision as for deciding~~ to ~~[[the]]~~ supply ~~[[of]]~~ the report indicating the exposure level used or ~~the performance of~~ to perform a second comparison step according to the result supplied by the first means of ~~comparison for~~ comparing.

29. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 27, ~~characterized in that~~ wherein the report indicating the exposure level used

corresponds to an under-exposure level when the difference Δ is less than or equal to the first value threshold1.

30. (Currently Amended) [[A]] The apparatus according to claim 27,
~~characterized in that wherein~~ the central processing unit further comprises a
second means ~~of comparison of~~ for comparing the maximum amplitude value
with a second value threshold2 that is adjusted to be implemented when the
difference Δ is greater than the first value threshold1.

31. (Currently Amended) [[A]] The apparatus according to claim 30,
~~characterized in that wherein~~ the central processing unit further comprises ~~the~~
means ~~of decision as~~ for deciding to the supply of the report indicating the
exposure level used or the performance of an additional test, according to the
result supplied by the second means ~~of comparison~~ for comparing.

32. (Currently Amended) [[A]] The apparatus according to claim 30,
~~characterized in that wherein~~ the report indicating the exposure level used
corresponds to a correct exposure level when the maximum amplitude value is
less than the second value threshold2.

33. (Currently Amended) [[A]] The apparatus according to claim 30,
~~characterized in that wherein~~ the central processing unit further comprises ~~the~~
means ~~of determination of~~ for determining the presence or absence of data
indicating an overflow in the digital output signal, ~~that is adjusted to be~~
implemented when the maximum amplitude value is greater than or equal to the
second value threshold2.

34. (Currently Amended) [[A]] The apparatus according to claim 33,
~~characterized in that wherein~~ the central processing unit comprises ~~the means of~~
~~decision as~~ for deciding to [[the]] supply [[of]] the report indicating the exposure
level used corresponding respectively to an over-exposure level or a correct

exposure level, according to the determination of the presence or absence of data indicating an overflow.

35. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 22,
~~characterized in that it wherein the means for supplying further comprises the~~
~~means of display of~~ for displaying the report indicating the exposure level used on
a display screen.

36. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 35,
~~characterized in that it wherein the means for displaying comprises means of~~
~~display of displays~~ the corresponding image signal on the display screen.

37. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 35,
~~characterized in that wherein~~ the report indicating the exposure level is displayed
in the form of at least one indicator whose position varies according to the report
obtained by the signal processing.

38. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 37,
~~characterized in that wherein~~ the position of the indicator varies according to the
difference Δ obtained.

39. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 35,
~~characterized in that wherein~~ the report indicating the level of under-exposure,
correct exposure or over-exposure is displayed in the form of a cursor producing a
visual effect that varies at least for certain exposure levels.

40. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 39,
~~characterized in that wherein~~ the visual effect is color.

41. (Currently Amended) ~~[[A]]~~ The apparatus according to claim 22,
~~characterized in that the~~ further comprising an analog-digital conversion unit that

has an input window adjusted to the dynamic range of the analog signal delivered by the sensor.

42. (Currently Amended) The [[M]]method according to claim 8, ~~characterized in that wherein~~ the report indicating the exposure level used corresponds to an under-exposure level when the difference Δ is less than or equal to the first value threshold1.

43. (Currently Amended) The [[M]]method according to claim 8, ~~characterized in that wherein~~ when the difference Δ is greater than the first value threshold1, then the processing further includes ~~a second step of comparison of comparing~~ the maximum value with a second value threshold2.

44. (Currently Amended) The [[M]]method according to claim 11, ~~characterized in that wherein~~ the report indicating the exposure level used corresponds to a correct exposure level when the maximum value is less than the second value threshold2.

45. (Currently Amended) The [[M]]method according to claim 11, ~~characterized in that, wherein~~ when the maximum amplitude value is greater than or equal to the second value threshold2, ~~then~~ the processing further includes ~~an additional test step in order to determine~~ determining the presence or absence of data indicating an overflow in the digital output signal.

46. (Currently Amended) The [[M]]method according to claim 14, ~~characterized in that it wherein~~ the supplying further includes ~~a step of display of displaying~~ the report indicating the exposure level used on a display screen.

47. (Currently Amended) The [[M]]method according to claim 18, ~~characterized in that wherein~~ the report indicating the level of under-exposure, correct exposure or over-exposure is displayed in the form of a cursor producing a visual effect that varies at least for certain exposure levels.

48. (Currently Amended) The [[M]]method according to claim 20,
~~characterized in that wherein~~ the ~~conversion step~~ converting is performed in an
analog-digital converter having an input window adjusted to the dynamic range of
the analog signal delivered by the intraoral sensor.

49. (Currently Amended) The [[A]]apparatus according to claim 28,
~~characterized in that wherein~~ the report indicating the exposure level used
corresponds to an under-exposure level when the difference Δ is less than or equal
to the first value threshold1.

50. (Currently Amended) The [[A]]apparatus according to claim 28,
~~characterized in that wherein~~ the central processing unit further comprises [[a]]
second means ~~of comparison of~~ for comparing the maximum amplitude value
with a second value threshold2 that is adjusted to be implemented when the
difference Δ is greater than the first value threshold1.

51. (Currently Amended) The [[A]]apparatus according to claim 31,
~~characterized in that wherein~~ the report indicating the exposure level used
corresponds to a correct exposure level when the maximum value is less than the
second value threshold2.

52. (Currently Amended) The [[A]]apparatus according to claim 31,
~~characterized in that wherein~~ the central processing unit further comprises ~~the~~
~~means of determination of~~ for determining the presence or absence of data
indicating an overflow in the digital output signal, ~~that is adjusted to be~~
~~implemented~~ when the maximum amplitude value is greater than or equal to the
second value threshold2.

53. (Currently Amended) The [[A]]apparatus according to claim 34
~~characterized in that it~~ wherein the means for supplying further comprises ~~the~~

means ~~of display of~~ for displaying the report indicating the exposure level used on a display screen.

54. (Currently Amended) The ~~[[A]]~~ apparatus according to claim 38, ~~characterized in that~~ wherein the report indicating the level of under-exposure, correct exposure or over-exposure is displayed in the form of a cursor producing a visual effect that varies at least for certain exposure levels.

55. (Currently Amended) The ~~[[A]]~~ apparatus according to claim 40, ~~characterized in that the~~ further comprising an analog-digital conversion unit ~~has~~ having an input window adjusted to the dynamic range of the analog signal delivered by the sensor.